

Goal 5

Compliance and Environmental Stewardship

Improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. Protect human health and the environment by encouraging innovation, and providing incentives for governments, businesses, and the public that promote environmental stewardship.

Goal 5, Compliance and Environmental Stewardship, is designed to protect human health and the environment by improving environmental behavior through regulatory and non-regulatory means. Under this goal, EPA will work to ensure that government, business, and the public meet federal environmental requirements and empower and assist them to do more. EPA programs designed to ensure compliance with federal environmental laws and regulations, to increase voluntary and self-directed actions to minimize or eliminate pollution before it is generated (pollution prevention), and to promote “stewardship” behavior will all contribute to the achievement of this goal.

EPA uses the term “environmental stewardship” to describe behavior that includes but exceeds required compliance. Stewards of the environment recycle wastes to the greatest possible extent, minimize or eliminate pollution at its sources, and use energy and natural resources efficiently to reduce impacts on the environment. Under this goal, EPA will strive to use science and research more strategically and effectively to inform Agency policy decisions and guide compliance, pollution prevention, and environmental stewardship efforts. Finally, EPA will work to provide necessary environmental protection to the Nation’s tribes and to assist them in building the capacity to implement environmental programs where needed and feasible.

OBJECTIVES

Objective 5.1: Improve Compliance. By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 3% increase in the pounds of pollution reduced, treated, or eliminated, and achieving a 3% increase in the number of regulated entities making improvements in environmental management practices. (Baseline to be determined for 2005)

Sub-objective 5.1.1: Compliance Assistance. By 2008, prevent noncompliance or reduce environmental risks through EPA compliance assistance by achieving: a 3% increase in the percentage of regulated entities that improved their understanding of environmental

requirements; a 3% increase in the number of regulated entities that improved environmental management practices; and a 3% increase in the percentage of regulated entities that reduced, treated, or eliminated pollution. (Baseline to be determined for 2005)

Sub-objective 5.1.2: Compliance Incentives. By 2008, identify and correct noncompliance and reduce environmental risks through a 3% increase in the percentage of facilities that use EPA incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve environmental management practices. (Baseline to be determined for 2005)

Sub-Objective 1.3: Monitoring and Enforcement. By 2008, identify, correct, and deter noncompliance and reduce environmental risks through monitoring and enforcement by achieving: a 3% increase in the number of complying actions taken during inspections; a 3% increase in the percentage of enforcement actions requiring that pollutants be reduced, treated, or eliminated; and a 3% increase in the percentage of enforcement actions requiring improvement of environmental management practices.

Means and Strategies to Achieve Objective 1

Environmental laws and regulations are designed to protect human health and safeguard the environment. But it is only through compliance that they can achieve their purpose. To ensure that the many and diverse private, public, and federal facilities it regulates—approximately 41 million under various statutes—comply with requirements, EPA has developed a strategy that combines monitoring and civil and criminal enforcement with programs that encourage facilities to self-correct by using voluntary audits and making other improvements. Violators who do not comply with statutory or regulatory environmental requirements may gain unfair advantages. EPA's compliance and enforcement program protects human health and the environment both by punishing violators to deter noncompliance and by strengthening the regulated community's ability to achieve compliance through improved performance—reducing potential pollution, reducing exposure to prohibited compounds and chemicals, and reducing the risk to human health and the environment.

EPA's compliance program is composed of four elements: compliance assistance, compliance incentives, compliance monitoring, and civil and criminal enforcement. The combination of these activities, conducted in cooperation with state, tribal, and local regulatory authorities, provides a broad range of actions designed to maximize compliance to protect human health and the environment.

Compliance Assistance

To assist regulated facilities in complying with environmental regulations, EPA will continue to

use a mix of tools and strategies to address particular compliance problems that exist in specific industrial, commercial, and government sectors or that are associated with certain regulatory requirements. EPA will continue to partner with state and local governments and to collaborate with trade associations to provide tools and materials to compliance assistance providers that work directly with the regulated community. In this role of “wholesaler” of compliance assistance, the Agency will continue to serve as a national repository and point-of-contact for information and materials. EPA’s virtual Compliance Assistance Centers will provide assistance directly to the regulated community and make available to the public compliance data that will provide citizens and the regulated community more timely information on the Agency’s progress. EPA also interacts directly with regulated entities through training, onsite visits, and workshops and assesses the results of its assistance efforts.

The Agency’s partnership activities also include establishment of a compliance assistance exchange forum to share information on best practices, outcome measurement, and new compliance assistance materials; an inter-agency roundtable of representatives from federal compliance assistance programs; and a clearinghouse of compliance assistance materials available from federal, state, local governments, academia, and trade associations. EPA will continue to publicize its compliance assistance efforts to help the regulated community anticipate and prevent violations of federal environmental laws that could lead to enforcement actions.

Compliance Incentives

EPA offers a suite of incentives to encourage government, industry, and business facilities to assess their overall compliance with environmental requirements and voluntarily correct and report compliance problems. The Agency will continue to make the Audit Policy (Self-Policing Policy) and other compliance incentives available to the regulated community. These incentives for compliance include reduced penalties for violations, extended time for correction, and potentially fewer or less frequent inspections. EPA also encourages owners of multiple facilities to disclose environmental violations because such disclosures encourage these regulated entities to review their operations more comprehensively, providing a greater overall benefit to the environment.

The Agency will continue to work with stakeholders to improve opportunities for industries voluntarily to self-disclose and correct violations. The Small Business Compliance Policy has recently been modified to encourage greater participation by small businesses. As part of the marketing and outreach it conducts to support this approach, EPA will work with small business compliance assistance providers to develop tools small businesses can use to understand applicable environmental requirements and take advantage of the flexibility offered by the policy. EPA also will continue to encourage states to adopt and communities to utilize the policy.

Compliance Monitoring and Enforcement

EPA uses monitoring and enforcement activities—inspections, civil and criminal investigations, administrative actions, and civil and criminal judicial enforcement—to identify the most egregious violators and return them to compliance as quickly as possible. EPA will continue to base its compliance monitoring and enforcement efforts on inspections, investigations, and enforcement actions carried out by the Agency and its state, tribal, and local government regulatory partners. To address the most significant risks to human health and the environment, including disproportionate burdens on certain populations, the Agency will target inspections, civil investigations, and criminal investigations to achieve the greatest reduction in pollution. For example, the Agency and its state and tribal partners review compliance data, the results of inspections and investigations, and citizen “tips” and complaints to target those areas that present high rates of noncompliance and significant risk to human health and the environment.

Objective 5.2: Improve Environmental Performance through Pollution Prevention, Innovation, and Analysis. By 2008, improve the environmental performance of governments, businesses, and the public by preventing pollution, increasing efficiency in operations, activities, and products, and creating incentives and reducing regulatory barriers for the adoption of cost-effective, multi-media, results-based approaches.

Sub-objective 5.2.1: Pollution Prevention by Government and the Public. Through 2008, reduce pollution throughout all sectors and levels of government operations, serving as models for others to follow, and improve the public’s awareness and role in preventing pollution.

Strategic Targets:

- By 2008, reduce TRI reported toxic chemical releases at Federal Facilities by 40%, from a baseline year of 2001.
- By 2008, double EPA's yearly purchases of “green” products and services including office supplies, electronic equipment, fleet operations, janitorial and maintenance services, meetings and conference management, from a baseline year of 2002.
- By 2008, all Federal agencies will have defined Environmentally Preferable Purchasing (EPP) programs and policies in place and be expanding their purchases of available "green" products and services, from a baseline of one Federal agency in 2002.

Sub-objective 5.2.2: Pollution Prevention by Industry. Through 2008, reduce pollution in business operations through the adoption of more efficient, sustainable and protective policies, practices, materials and technologies.

Strategic Targets:

- By 2008, prevent 12 billion lbs. of industrial hazardous chemical releases to the environment and hazardous chemicals in industrial wastes, from the baseline year of 2003.
- By 2008, reduce waste minimization priority list chemicals in hazardous waste streams reported by businesses to TRI by 50% from 1991 levels.
- By 2008, conserve 400 billion BTUs of energy and 10 billion gallons of water, reduce 93 thousand metric tons of CO2 emissions, and save \$1 billion of unnecessary costs as a result of pollution prevention activities, from a baseline year of 2003.
- By 2008, reduce by 10 % industrial TRI chemical releases and wastes produced per unit of production, from a baseline year of 2002.

Sub-objective 5.2.3: Business and Community Innovation. Through 2008, achieve measurably improved environmental performance through sector-based approaches, performance-based programs, and assistance to small business.

Strategic Targets:

- Through 2008, Performance Track members who commit to improvements in the following environmental categories will achieve average annual reductions of: 3% in water use; 3% in energy use; 3 % in total solid waste; 1% in air releases*; and 5% in water discharges*. These reductions will be normalized, where possible. [*These improvements are beyond existing regulatory requirements.] Baseline: In 2002, Performance Track members reduced their water use by 5%, decreased their energy use by 6%, reduced their total solid waste by 8%, increased their air releases by 4%, and decreased their water discharges by 25%.
- Through 2008, annually provide outreach and technical assistance to 50 state and 3 territorial small business assistance programs to reach 750,000 small

businesses across the nation using a variety of innovative tools and approaches. Baseline: 450,000 small businesses reached through technical assistance providers in 50 states and 3 territories in 2001.

- Through 2008, work with business sectors to remove regulatory and other performance barriers and increase the number of facilities using environmental management systems, enabling member companies in participating sectors to achieve aggregate annual reductions of 3% in greenhouse gas emissions, other significant air releases, energy use, and water discharges; a 1% aggregate annual waste reduction; and an aggregate annual increase of 100 facilities using EMS. (Baseline: to be developed, using 2000-2002 data from participating sectors.)

Sub-objective 5.2.4: Environmental Policy Innovation. Through 2008, achieve measurably improved environmental and economic outcomes by testing, evaluating, and applying alternative approaches to environmental protection in states, companies, and communities.

Strategic Targets:

- Through 2008, facilitate the review of all new innovative approaches proposed to EPA annually. Baseline: 70 percent, 2002.
- Through 2008, demonstrate 5 innovative approaches proposed to EPA annually. Baseline: 3, 2002.
- Through 2008, annually evaluate 5 innovative approaches to environmental protection. Baseline: 3 evaluations, 2002.
- Through 2008, facilitate the adoption of 5 new innovative approaches in Federal and State environmental programs. Baseline: 1 innovation adopted by multiple states, 2002.

Sub-objective 5.2.5: Economic Analysis. Through 2008, improve the Agency's regulatory and non-regulatory decisions through the development of sound economic analysis, clear analytic guides, and other economic tools used to estimate environmental costs and benefits.

Sub-objective 5.2.6: Regulatory Policy Analysis. Through 2008, enhance EPA's regulatory decision-making process through sound analysis and consideration of alternatives.

Sub-objective 5.2.7: Implement NEPA. Through 2008, minimize significant adverse environmental impacts that result from major proposed Federal actions, including EPA actions subject to the National Environmental Policy Act (NEPA).

Strategic Targets:

- 70 percent of significant impacts identified by EPA in its review of Draft Environmental Impact Statements (EISs) are successfully mitigated.
- 80 percent of EPA projects subject to NEPA (water treatment facility project and other grants, new source National Pollutant Discharge Elimination System [NPDES] permits, and EPA facilities) result in a finding of no significant environmental impact. (Baseline: In FY 2002 EPA issued XX Findings of No Significant Environmental Impact out of a total universe of YY projects subject to NEPA Environmental Assessment [EA] or EIS requirements.)

Means and Strategies to Achieve Objective 2

Pollution Prevention

The Pollution Prevention Act of 1990 establishes pollution prevention as a “national objective” and the pollution prevention hierarchy as national policy. The Act declares that pollution should be prevented or reduced at the source wherever feasible; that pollution that cannot be prevented should be recycled in an environmentally safe manner; and that, in the absence of feasible prevention or recycling opportunities, pollution should be treated. Disposal or other release into the environment should be used as a last resort.

EPA intends to achieve its pollution prevention goals through voluntary partnerships. The Agency will work with industry to build pollution prevention into the design of manufacturing processes and products and team with states, tribes, and governments at all levels to find simple, voluntary, and cost-effective pollution prevention solutions. EPA will promote the principles of responsible stewardship, sustainability, and accountability in developing approaches to prevent pollution.

Executive Order 13101 mandates that EPA assist Executive agencies in making purchasing decisions that are less damaging to the environment. The Agency established the Environmentally Preferable Purchasing (EPP) program to provide guidance and carry out a variety of initiatives and outreach activities for a wide constituency, including federal agencies. Under the EPP program, EPA will help purchasers conduct thorough life cycle analysis to identify products that generate less pollution,

consume fewer non-renewable natural resources, and are less threatening to human health and to wildlife. Our strategy harnesses the purchasing power of government to stimulate demand for “greener” products and services, thereby fostering manufacturing changes. We will identify environmental performance standards by which products can be evaluated, for example, criteria and standards to evaluate chemical cleaning products and their impact on the environment. The Agency will also invest in the development of tools, such as life cycle analysis tools, that businesses and purchasers can use to identify key environmental attributes and evaluate the environmental performance of products. In developing and distributing these tools, we will coordinate and cooperate with businesses, states, tribes, and environmental groups and will rely on the expertise of other federal agencies, such as the National Institute of Standards and Technology.

Under Executive Order 13134 and the Farm Bill, EPA has an important role in developing and promoting biobased products and energy. Biobased products are made from renewable agricultural, animal, or forestry materials, such as vegetable-based lubricants, biofuels, or compost. The Order sets a goal of tripling U.S. use of bioenergy and bioproducts by 2010. To meet this goal, EPA will work closely with the U.S. Department of Agriculture not only to promote the use of these renewable sources of resources, but also to assure that they are protective of the environment.

EPA remains committed to helping industry further prevent pollution by adopting more efficient, sustainable, and protective business practices, materials, and technologies. A vital component of our strategy is the continuation of the Pollution Prevention State Grant program. Annually, EPA provides \$6 million to states and tribes to support their efforts to provide industry with technical assistance, information sharing, and outreach. The grants also support promising, innovative new ideas for preventing pollution. Finally, states will require adequate resources dedicated to pollution prevention to implement strategies successfully. EPA will monitor state resource levels and work with states to expand resource commitments for pollution prevention.

Apart from its work with business, the Agency will continue to target prevention of hazardous chemical releases and wastes generated by federal facilities. Working with the states; in coordination with other federal agencies; and armed with pollution prevention tools, technologies, and data generated through the Agency’s Toxic Release Inventory, we will work to reduce toxic chemical releases at federal facilities by 40 percent (from a 2001 baseline) by 2008. To help achieve this goal, and to continue reducing other environmental impacts at federal facilities, we will promote the use of environmental management systems under Executive Order 13148. These systems help to address environmental impacts through measured problem identification and response, rather than crisis management. Leading by example, EPA will be implementing environmental management systems at 34 of its own facilities.

EPA’s Green Chemistry Program (www.epa.gov/greenchemistry) supports research and

fosters development and implementation of innovative chemical technologies to prevent pollution in a scientifically sound, cost-effective manner. Through voluntary partnerships with academia, industry, and other government agencies, Green Chemistry supports fundamental research in environmentally benign chemistry and provides a variety of educational and international activities, including sponsoring conferences and meetings and developing tools. The Presidential Green Chemistry Challenge Award program recognizes superior achievement in the design of chemical products.

Traditionally, engineering approaches to pollution prevention have been focused on waste minimization and have not addressed risk factors such as exposure, fate, and toxicity. EPA's Green Engineering (GE) program (www.epa.gov/oppt/greenengineering) promotes consideration of these factors in the design, commercialization, and use of chemical products and the development of feasible, economical processes that minimize generation of pollution at the source. A goal of the GE program is to incorporate "green" or environmentally conscious thinking and approaches in the daily work of engineers, especially of chemical and environmental engineers. Similarly, EPA's Design for the Environment (DfE) Industry Partnership Program promotes integration of cleaner, cheaper, and smarter pollution prevention solutions into everyday business practices. DfE (www.epa.gov/dfe) will continue to work with industry sectors to reduce risks to human health and the environment, improve performance, and save costs associated with existing and alternative technologies or processes.

To reduce priority chemicals in hazardous wastes going to landfills, EPA will focus on key waste streams and waste generators through a variety of mechanisms, including the Waste Minimization Partnership Program (part of the Agency's Resource Conservation Challenge). The Waste Minimization Partnership Program encourages EPA, state and local governments, manufacturers, and other non-governmental organizations to form voluntary partnerships to reduce the generation of hazardous wastes containing any of 30 priority chemicals. Companies that become Waste Minimization Partners are publicly recognized for their contribution to the national reduction goal. In 2003, EPA worked with a limited number of Charter Members in a pilot effort to ensure that all aspects of the program were operating smoothly. EPA will now be accepting applications from additional companies that meet membership criteria with the goal of recruiting 100 new partners, including Fortune 500 companies and small businesses, over the next 5 years. Our primary goal, however, will remain not the number of Program participants, but the reductions in chemical wastes that can be achieved.

The Resource Conservation Challenge (RCC) also focuses on recovering materials and energy, either by converting wastes into products and energy directly or as a result of process and product redesigns that produce these benefits. We will closely coordinate our RCC efforts with the Agency's other pollution prevention activities, potentially revising our strategies or targets to focus on materials and energy recovery through recycling when source reduction is not a feasible solution. The Agency is also working with its partners to identify additional goals. These new goals will reflect our expanded effort, beginning in 2003, to increase recovery of materials and energy and reduce releases of priority

chemicals in waste. We expect these new goals to be in place by 2004, as the program becomes fully operational.

Innovation

EPA is committed to developing and promoting innovative strategies that achieve better environmental results, reduce costs, and reward stewardship. In collaboration with its state and tribal partners, the Agency will continue to focus its efforts on innovations that will assist small businesses and communities in improving both their environmental performance and their bottom lines. EPA has prepared an Innovations Strategy to guide our efforts in this and other areas. The Strategy relies on continued outreach to states, tribes, and business to help identify innovative approaches that merit testing, evaluation, and implementation. Innovation also plays a role in the Agency's implementation of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, which requires EPA to review other federal agencies' environmental impact statements and make its comments public.

Improving Business and Community Environmental Performance

EPA will continue to advance environmental protection through innovative and collaborative approaches with business and other governmental entities. EPA's National Environment Performance Track program, for example, recognizes and rewards superior environmental performance and motivates improvement. Through Performance Track, the Agency will continue to recruit high-performing facilities that have the environmental policies and management systems needed to deliver better results and will create mechanisms and resources for sharing information that can help other Performance Track members and prospective members improve their performance.

Because small businesses represent approximately 99 percent of U.S. business, their environmental performance is critical to our success in protecting human health and the environment. EPA's Small Business Ombudsman will be revising our Small Business Strategy to coordinate the many Agency programs and activities targeted to small business. The strategy will guide the Agency's efforts to reach out to small business and to provide technical assistance to states and tribes. EPA will regularly evaluate and update its Small Business Strategy to ensure that it addresses the changing economic, social, and political trends that affect small businesses and meets the needs of the small business community.

Under its Sector Performance Improvement Program, EPA also tailors environmental performance improvement efforts to particular industry sectors. The Agency will continue to select sectors based on criteria such as their impact on national and regional priorities, trade association interest, and facility-level Environmental Management System development. The Agency will designate a staff liaison with expertise on the sector to develop and maintain partnerships and facilitate quick

responses to sector-specific questions and issues. Through its website, the Agency will also continue to provide an array of sector-specific information on pollution prevention, voluntary partnerships, best practices, sector performance, and other topics.

Improving Environmental Protection Policy

To foster innovation in environmental protection, the Agency reaches out to states, tribes, business, and others to identify new approaches that merit further testing, development, and potential dissemination. Over the next 5 years, EPA plans to test and demonstrate up to five innovations annually. In partnership with states and industry, and through programs and agreements that have been created since the mid-1990s, we will focus on priority environmental problems to improve environmental protection while increasing efficiency and cost savings. For example, the State Innovations Grant Program will fund projects that use innovative approaches to permitting. The Program will broaden its solicitation of state and tribal projects and will continue to provide direct assistance on a number of the most promising projects. The Agency will also continue to collect, review, approve, and help implement state proposals through the Environmental Council of States and EPA's Joint Agreement to Pursue Regulatory Innovation.

Various Agency offices will cooperate to expand program evaluation in two ways. First, the Agency will share evaluation results and collective learning experiences among programs. Second, it will promote tools and techniques that address the unique challenges associated with measuring and evaluating innovation. The Agency-wide "Improving Results: Program Evaluation and Performance Measurement Improvement Competition" will again fund program evaluation projects for innovation, as well as other key program areas. Improving our evaluation capabilities will also assist EPA in responding to the Office of Management and Budget program assessment rating tool that requires comprehensive, independent, impact evaluations.

EPA will continue to promote promising innovations that provide for the use of more flexible and performance-based regulation, multimedia approaches, incentives for superior performance, market-based approaches, public involvement processes, and programs tailored for small sources. In some cases these improvements will be brought about through changes in national rules or policies; in others, they may occur through a more gradual process of adopting new techniques across states or Agency programs. EPA will facilitate these processes by encouraging Agency, state, and tribal staff to submit innovative ideas and suggestions to a central point; using the Agency's Innovation Action Council as a forum to obtain senior-level endorsement of promising innovations; identifying pilot projects that can be mined for "lessons learned;" holding national symposia during which federal, state, and tribal officials can share information and experiences; and use of its online "innovation catalog" to disseminate information about ongoing projects.

Economic and Regulatory Policy Innovation

EPA is working to strengthen its decision-making processes for both regulatory and non-regulatory actions by continuing to improve its policy and economic analyses. The Agency will be reviewing its regulatory development procedures to ensure that they provide for management attention throughout the process, cross-office participation in priority rule makings, and planning for better analytic research. EPA will conduct detailed regulatory analyses in a number of high-priority industry sectors to identify particular business characteristics and needs and to craft innovative solutions to priority environmental problems.

EPA continues to identify important economic issues that require further research and analysis. To address these issues, the Agency will prepare an Environmental Economics Research Strategy that establishes three priority research topics each year from FY 2004 through FY 2008 and guides development of economic analyses. The Agency will also issue its first Ecological Benefits Strategic Plan, which will establish a framework for applying existing methods and data to help determine the value of ecological impacts resulting from its policies and regulation. Under its Risk Assessment for Benefits Analysis Project, the Agency will continue to contribute to the measurement and valuation of human health benefits. In addition, the Agency will revise its guidance on the value of human health improvements, reexamining the literature associated with estimating the value of reductions in premature mortality. EPA will continue to support development of indicators of environmental health for the general population and for subpopulations of interest.

EPA will continue its efforts to measure the influence of environmental costs on individual plant and industrial sector performance and analyze the effects of environmental regulations on the size, structure, and performance of domestic and international economic markets. To accomplish these efforts, EPA will train staff and managers involved in the development of benefit-cost analyses or in the decision-making process and will provide appropriate guidance material.

EPA will conduct similar efforts to improve its regulatory policy analysis. For example, the Agency will review its workgroup process for developing regulations and identify opportunities for improvement. We will assess the usefulness of our Analytic Blueprint process, which encourages early participation of workgroup members and allows senior Agency managers to provide early guidance to the workgroup, and enhance our regulation tracking system through the addition of accountability and management information (such as upcoming actions, statutory and court-ordered deadlines, and general progress reports.) In addition, we will train staff in the regulatory development process, emphasizing the integrity of the regulation development process, and identify additional training needs. Finally, the Agency will work to ensure that high priority legislation, such as the Regulatory Flexibility Act, the Unfunded Mandates Reform Act, and the Data Quality Act, as well as priorities identified in Presidential Executive Orders and other topics such as Federalism and Children's Health, are reflected

in EPA regulations.

Implementing the National Environmental Policy Act

EPA actions that are subject to NEPA requirements include wastewater and drinking water treatment plant construction and other grants, EPA-issued new source water discharge permits, and EPA facility construction. For actions that may impact the environment, EPA prepares either an environmental assessment that supports a finding of no significant impact or an environmental impact statement. The Agency will continue to comply fully with NEPA requirements and to implement mitigation measures to ensure that EPA-sponsored activities result in no significant environmental impact.

In addition, Section 309 of the Clean Air Act requires EPA to review and make public its comments on other federal agencies' environmental impact statements. EPA performs this role in consultation with the White House Council on Environmental Quality (CEQ). EPA promotes environmental stewardship by establishing strong working relationships with other agencies. For example, EPA helps other agencies scope out their environmental impact statements; assists them in developing projects to avoid environmental impacts; supports streamlined environmental review processes; participates in rotational assignment programs; participates in interagency work groups; and provides training and guidance.

Objective 5.3: Build Tribal Capacity. Through 2008, assist all federally recognized tribes in assessing the condition of their environment, help in building tribes' capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.

Strategic Targets:

- By 2008, increase tribes' ability to develop environmental program capacity by ensuring 100% of federally recognized tribes have access to an environmental presence. (FY 02 baseline: 82% of tribes)
- By 2008, develop or integrate 15 (cumulative) EPA and interagency software applications to facilitate the use of EPA Tribal Baseline Assessment Project information in setting environmental priorities and informing policy decisions. (FY 03 baseline: Two.)
- By 2008, eliminate 20% of the data gaps for environmental conditions for

major water, land and air programs as determined through the availability of information in the EPA Tribal Baseline Project.

- Commencing in 2004, produce an annual status of the tribal environment report.
- By 2008, increase implementation of environmental programs in Indian country to X (cumulative total) as determined by program delegations, approvals or primacies issued to tribes and direct implementation activities by EPA. (FY 02 Baseline: Program actuals TBD.)
- By 2008, increase by 50% the number of tribes with environmental monitoring and assessment activities under EPA approved quality assurance procedures.
- By 2008 increase by 50% the number of tribes with multi-media programs reflecting traditional use of natural resources as determined by use of Performance Partnership Grants (PPGs), EPA/Tribal Environmental Agreements (TEAs), and other innovative EPA agreements which reflect holistic program integration.

Means and Strategies to Achieve Objective 3

EPA's strategy for achieving its objectives in Indian country has three major components. First, the Agency will work to develop the information technology infrastructure needed to measure environmental conditions in Indian country and related lands and the environmental results that accrue from the implementation of environmental programs on those lands. Second, EPA will continue to distribute Indian General Assistance Program capacity building grants with the goal of establishing an environmental presence in all 572 federally recognized tribes in the United States. Third, the EPA's American Indian Environmental Office will continue to coordinate closely with Agency programs to guide and track the timely and appropriate implementation of those programs directly on Indian lands. This work is closely related to efforts described under the tribal component of EPA's cross-goal Partnership strategy. (See Chapter 6.)

EPA will continue to construct an information technology infrastructure that organizes environmental data on a tribal basis, enabling a clear, up-to-date picture of environmental activities in Indian country. We will take advantage of new technology to establish direct links with other federal agencies (including the U.S. Geological Survey, Bureau of Reclamation, and Indian Health Service) to create an integrated, comprehensive, multi-agency Tribal Information Management System (TIMS). This interactive system will allow tribes and EPA regional offices to supply management information that

supplements data collected by the national tribal systems.

In addition, EPA will develop Strategic Plan Tracking Systems (GPRA Tracking Systems) to follow progress in achieving tribal objectives, sub-objectives, and strategic targets on a real-time basis. The Agency will use data available through TIMS and allied GPRA Tracking Systems to adjust approaches and activities as necessary to achieve improved results on tribal lands and to report to the tribes on the progress the Agency is making. These tools will also assist in determining resources and skills needed over the 5-year cycle of the Strategic Plan.

Consultation and direct partnerships with tribes are integral to EPA's strategy. The Tribal Caucus, which has advised the Agency on tribal issues for several years, will serve as the focal point for work under this Objective and will help facilitate continued development of EPA-tribal partnerships. The Agency will also engage other EPA-sponsored tribal groups, such as the Tribal Committee of the FOSTTA [\[need to spell out\]](#) organization, the Tribal Pesticides Program Council, the Tribal Association for Solid Waste and Emergency Response, and the Tribal Science Council, to help achieve environmental improvements in Indian country.

Objective 5.4: Science/Research. Through 2008, strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

Sub-objective 5.4.1: Science. By 2008, all (100 percent of) routine National Enforcement Investigations Center environmental measurements (field or laboratory) will be accredited by an internationally recognized, third party organization. FY 2001 baseline: 30 areas of environmental data collection

Sub-objective 5.4.2: Research. Conduct leading-edge, sound scientific research on pollution prevention, new technology development, socio-economics, and decision making. By 2008, products of this research will be independently recognized as providing critical and key evidence in informing Agency policies and decisions, and solving problems for the Agency and its partners.

Means and Strategies to Achieve Objective 4

EPA is working to strengthen the science that it needs to make sound decisions and establish effective compliance and enforcement policies. The Agency is continuing to conduct research on pollution prevention, new and developing technologies, social and economic issues, and decision making, and it will use the results of these studies to develop products and tools that EPA, its partners,

and stakeholders can use to promote conservation of energy and natural resources, pollution prevention, recycling, and other aspects of environmental stewardship. Advancing science and research will not only benefit the Agency and its partners, however. It will also help to clarify requirements and expectations for members of the regulated community and provide tools and strategies to help them comply.

Science

EPA's science work under Goal 5 has a two-fold purpose: (1) to improve the science that supports compliance monitoring, inspections, investigations, case support, and selected regulations and (2) to continue to provide premier investigatory work for the Agency in support of enforcement and compliance assistance. To accomplish these ends, EPA's National Enforcement Investigations Center (NEIC) will implement a nationally and internationally recognized quality system that provides for third party oversight and features both technical/scientific and the forensic elements of environmental data collection and measurement. Through NEIC, EPA will also work to improve field and laboratory measurement techniques and to advance innovative analytical approaches to support compliance and enforcement efforts.

Research

The Agency is continuing to conduct research on pollution prevention, new and developing technologies, social and economic issues, and decision making, and it will use the results of these studies to develop products and tools that EPA, its partners, and stakeholders can use to promote conservation of energy and natural resources, pollution prevention, recycling, and other aspects of environmental stewardship.

EPA will work with its partners and stakeholders to identify research needs, set priorities, and develop project plans. We will concentrate on (1) research that will help identify best practices and approaches and promote, at a minimum, compliance with all regulatory requirements and (2) research that may yield new, innovative approaches to improve performance and results in areas such as pollution prevention or sustainable development. For example, over the next 5 years EPA's Office of Research and Development (ORD) will conduct research and prepare reports and assessments on renewable resources, metal processing fluids, fuel cells, and buildings. We will share these products with industry, academia, and other agencies to further their work in preventing pollution. Other research efforts will result in four generic sustainable environmental system methodologies (using market incentives, ecological food-web models, hydrological models, and pest resistance management frameworks) for watershed management; an evaluation of the effectiveness and efficiency of market-based incentive approaches as compared to traditional environmental regulation; and efforts to make innovative environmental technologies, such as those EPA would use for building decontamination and

water security, commercially available.

EPA has developed multi-year plans for research on pollution prevention and new technologies for environmental protection and economics and decision sciences that lay out long-term goals and describe targets the Agency intends to meet to reduce scientific uncertainties.

Pollution Prevention and New Technologies for Environmental Protection

Over the last decade, the Agency has increasingly focused on pollution prevention when addressing high-risk human health and environmental problems. A preventive approach requires (1) innovative design and production techniques that minimize or eliminate adverse environmental impact; (2) holistic approaches that make the most of our air, water, and land resources; and (3) fundamental changes in the ways that goods and services are created and delivered to consumers.

As part of its multi-year plan, EPA has established five long-term goals for pollution prevention and new technologies research. These goals focus on the development of tools, technologies, and sustainable environmental systems approaches and on continuing to prevent and control pollution by targeting sources and sectors that pose the greatest risks to human health and the environment. Within the 5-year scope of this *Strategic Plan*, EPA will:

- Develop new and advanced theories and methods of environmental system analysis, along with decision-support tools based on those methods, that can be applied within industrial sectors and beyond (for example, in municipal, agricultural, transportation, and energy areas);
- Complete and document studies in areas such as kinetics, catalysis, reaction engineering, materials, interfaces, separations, thermodynamics, and applied engineering that will enable regulators and the regulated community to determine how these new concepts can be applied to accelerate the introduction of cleaner processes and materials in specific industries, energy production processes, or consumer products, thereby reducing emissions and resource usage;
- Provide appropriate and credible performance information about new, commercial-ready environmental technologies that will promote the purchase of effective environmental technology in the United States and abroad;
- Assemble and deliver to state and local governments a watershed-scale strategy for sustainable environmental systems based on computer-based tools and a manual of suggested management practices to reduce risks to human health and the ecology using combined economic, hydrologic, physical and ecological, land use, legal, and technological methods; and

- Use Small Business Innovation Research incentive funding to develop and commercialize innovative environmental technologies that EPA, state, and local regulatory and compliance programs need to protect human health and the environment.

Economics and Decision Sciences

As long as environmental policy is designed to change behaviors that cause environmental problems, economics and decision sciences research will be essential to understanding these behaviors. In addition, this research informs state and federal environmental agencies on how best and most cost-effectively to accomplish three overarching responsibilities: (1) anticipating, identifying, and setting priorities for managing environmental problems to protect ecological and human health; (2) developing policies to address the selected environmental priorities; and (3) implementing the policies to achieve better environmental outcomes.

Under its multi-year plan, EPA has established five long-term goals for economics and decision sciences research that focus on changing behaviors that cause environmental problems; developing tools to assess the highest priority issues based on public preferences; and developing implementation strategies that accurately account for behavioral responses to government initiatives and interventions. Within the 5-year scope of this *Strategic Plan*, EPA will:

- Develop reliable estimates of how people value environmental and health benefits, with a particular emphasis on children's health issues;
- Identify the motivations that influence the behavioral responses of corporations or other regulated entities to various government interventions, including regulatory enforcement, information dissemination, and voluntary initiatives;
- Identify behavioral responses to market mechanisms and incentives. Research will investigate how programs can be designed to take advantage of predictable behavioral responses to deliver cost effective environmental protection;
- Identify and categorize the environmental behavior and decision making of a variety of different actors, from individuals to community groups, that are affected by pollution or changes in environmental quality; and
- Identify the socioeconomic causes and consequences of the potentially most significant long-term environmental issues and develop tools for predicting and addressing them.

HUMAN CAPITAL STRATEGY

Protecting human health and the environment through compliance with environmental requirements, improving environmental performance through pollution prevention, and promoting environmental stewardship will require a workforce that has the appropriate knowledge, skills, experience and expertise. The Agency's work under this Goal is dynamic, and our workforce must be able to respond quickly to emergency situations, evolving environmental problems, and changing priorities. To meet these objectives, it is critical that we identify and address our human capital needs over the next 5 years. EPA will need effective, resourceful leaders who understand and can articulate the strategic direction for compliance and environmental stewardship and employees who can continue traditional tasks while taking on new roles and responsibilities.

A growing number of senior managers and employees who support this goal will be eligible to retire over the next few years. We will need to attract new employees who possess a diversity of skills and perspectives reflecting an academic grounding in environmental law, science, social science, engineering, chemistry, economics, and marketing. To accomplish our compliance assurance work, we will need to attract skilled attorneys, engineers, and scientists to develop and distribute compliance assistance tools, carry out civil and criminal inspections and investigations, and conduct litigation when necessary. To support our innovations and science/research efforts, we will also need to recruit scientists, economists, chemists, systems ecologists, risk assessment modelers, risk communication specialists, and decision analysts. We have defined core competencies that will be needed over the next 10 years to support the Agency's renewed focus on sound science and research.

We will also be faced with the challenges of maintaining critical expertise to carry out multi-disciplinary work in cooperation with our partners and stakeholders (states, tribes, small businesses, communities, other federal agencies, civic and environmental organizations, various scientific organizations, and academia). For example, we need a workforce committed to innovative approaches that ensure compliance with environmental laws and help achieve higher levels of environmental performance. This involves working creatively with regulatory partners and small businesses; providing outreach to targeted audiences and sectors on the availability and benefits of compliance assistance and voluntary programs; and applying knowledge of and experience with environmental management systems, audit protocols, and other best management practices. Lastly, as we continue our important work with federally recognized tribes, we will need to enhance our cadre of trained grant project officers and employees who are well-versed in federal Indian law and who are sensitive to issues in Indian country and Alaskan Native Villages.

To expedite the hiring process, we will select from existing pools of qualified candidates by using Direct Hire Authorities (including Peace Corps, Outstanding Scholar), recruit from established intern programs (such as EPA's and the Presidential Management Intern programs), and host detailees

from state and tribal organizations. In efforts to retain highly motivated and competent employees, we will revise our mechanisms for rewarding risk-taking and innovation and ensure a high-quality work environment. In order to ensure that expectations are clear and focused on results, we will put in place employee performance agreements that contain specific outcome measures of successful performance and individualized incentives that will customize rewards for exceptional results.

PROGRAM EVALUATION

A February 2001 General Accounting Office (GAO) report entitled “Environmental Protection: EPA Should Strengthen its Efforts to Measure and Encourage Pollution Prevention” (GAO-01-283) examined the extent to which companies have adopted pollution prevention approaches and the major factors which either encourage or discourage private sector decisions to employ such strategies. In this report, GAO concluded that improved data collection and measurement are critical needs, stating that “EPA officials note that the limitations of available data inhibit both their ability to ascertain the extent to which companies use pollution prevention practices, and their attempt to target efforts to further encourage these practices.” GAO’s recommendations focused on the need for EPA to clarify source reduction reporting requirements and to obtain accurate data on the quantity of emissions reduced. In response to this study, EPA has taken steps to improve its ability to measure source reduction. As a result of these actions, performance measurement architecture for the *Strategic Plan* is for the first time composed of specific measurable targets for pollution prevention, expressed in terms of the quantity of waste reduced (for example, “By 2008, reduce by X percent TRI business-reported wastes from 19__ levels”).

EXTERNAL FACTORS

EPA’s ability to meet its objectives for compliance and environmental stewardship may be affected by a number of factors. For example, natural catastrophes such as floods, significant chemical spills, or the new challenges associated with homeland security and responding to real or potential terrorist threats may require the Agency to revise its priorities and redirect its resources.

The Agency relies heavily on its partnerships with other federal agencies, states, tribes, local governments, the regulated community, and the public to advance protection of human health and the environment. Many of the strategic targets the Agency has set under Goal 5 are predicated on the assumption that states and tribes will be able to maintain or increase their levels of compliance and enforcement work or that, for example, the U.S. Department of Justice will accept or prosecute cases.

In the area of pollution prevention, for example, the Agency’s work is almost entirely

dependant on voluntary partnerships, collaboration, and persuasion, since there are few environmental regulations that set specific source reduction requirements. The Design for the Environment Program seeks partnerships with industry trade associations to engage jointly in the development and marketing of products that generate less pollution. The Green Chemistry Program challenges industry and the academic community to step forward with new chemical formulations that pose fewer risks to human health and the environment. And EPA's strategy of "greening the supply chain" depends on the willingness of large manufacturers voluntarily to require their suppliers to provide environmentally preferable products. These efforts all depend on our partners' continued willingness to cooperate in joint endeavors that may not realize an immediate payoff. EPA's ability to carry out its voluntary pollution prevention initiatives could be reduced if partners begin to believe that the initiatives are not worthwhile, are too risky, or are otherwise contrary to their best interests.

The community that contributes to and uses EPA's data and information is also evolving. As states and tribes develop the ability to integrate their environmental information, EPA will need to adjust its systems to ensure that it can receive and process reports from states and industry under Agency statutory requirements. Citizen and community organizations and the public at large are also increasingly involved in environmental decision making, and their need for quality information and more sophisticated analytical tools is growing.

Finally, the regulated community's willingness to comply with the law and to exceed minimum requirements is an obvious factor in the Agency's achievement of its compliance and environmental stewardship goals. A key component of our waste minimization strategy for reducing priority chemicals from waste streams, for example, is the commitment that small and large businesses make to work with EPA and other governmental organizations to address the targeted chemicals.